#### March 14, 2003

### VIA U.S. MAIL & FAX (573) 751-0534

Land Reclamation Commission c/o Larry Coen Department of Natural Resources P.O. Box 176 Jefferson City, MO 65102

Re: Sand and Gravel Rulemaking

Dear Commissioners:

The Missouri Coalition for the Environment ("MCE") provides the following comments with respect to the draft gravel mining regulations that are to be considered at your March 26, 2003, meeting. These comments are largely based on the January 10, 2003, draft recommendations from the gravel mining rulemaking workgroup.

On many of the issues addressed in the workgroup's recommendations there are two dominant positions: one favored by the mining industry and the other favored by conservation and outdoor recreation organizations. For ease of reference, these comments often refer to the "industry proposal" to designate the recommendation favored by industry associations, operators and property rights groups. The reference of "conservation proposal" will often be used to designate the recommendation favored by conservation and outdoor recreation organizations.

### Scientific Basis for Gravel Mining Rules

It was stated repeatedly by some interests at the workgroup meetings that there is not enough scientific evidence to support the regulation of gravel mining. The record compiled to date does not support this contention. In fact, there is ample evidence that gravel mining causes harm to aquatic resources regardless of how carefully it is done. Science-based regulations can, however, reduce some of the negative impacts.

The U.S. Geological Survey has written that "[r]esearch in other regions has shown that instream gravel mining destabilizes stream channels and substantially degrades instream habitat and habitats of associated wetlands." Similarly, a study by Arkansas State University of streams in an area similar to southern Missouri determined that the economic benefits of instream gravel mining did not outweigh the environmental costs." The environmental costs were listed as financial losses to farms, real estate, fisheries and recreation.

Moreover, after reviewing the scientific literature and considering the extent of gravel mining in Missouri, the Department of Conservation concluded in 1999 that "methods and rates of mineral extraction at many of these sites [in Missouri] have introduced further instability to stream channels, and harmful effects on aquatic life is likely significant." An earlier MDC study found that a decline in mussel populations in one stretch of the Osage River was linked to nearby gravel mining.

Studies around the country have indicated that gravel mining on gravel bars and in the riparian corridor of streams can result in head cutting, channel incision, lateral instability, increasing stream gradients, channel relocation, scouring and erosion. Habitat disruptions related these physical effects of gravel mining can cause a reduction in biological diversity and production. For example, the Arkansas Game and Fish Commission has noted a 50 percent decline in the number of smallmouth bass downstream from gravel mines because of a 15 fold increase in silt and turbidity.

To answer those who assert there is a lack of scientific foundation for the proposed regulations, the Commission need look no further than the Department of Conservation's 1999 report from its review of the science relating to the impact to aquatic resources from gravel mining. The report cited no less than 19 studies on the impact of gravel mining, and numerous other studies and reports addressing related aquatic resource issues. After reviewing these references, the Department of Conservation rendered the following conclusion with regard to the current state of gravel mining regulation in Missouri:

Instream mineral mining and some forms of floodplain mining can be harmful to Missouri's stream resources, public infrastructure, and personal property. Current legal requirements do not adequately protect these public and private resources, and enforcing agencies are hampered by inadequate funding and low staffing levels. New guidelines or regulations that increase protection of these resources are needed and should have flexibility to fit local needs and conditions.

## **Streamside and Vegetation Buffer**

#### (Section 2)

There were two primary options with respect to the size of buffer that should be required by the regulation. The industry proposal took a subjective approach that would require the LRP to make a case-by-case determination of what size buffer would be required to prevent turbidity and protect aquatic resources. The conservation proposal established a maximum buffer of 20 feet, but would allow for smaller buffers if it would not significantly impact aquatic resources.

The LRP should have definite guidance in its regulations on how wide buffers must be for resource protection. The industry proposal, in failing to provide definite guidance, will undoubtedly result in heavy lobbying by permit applicants for small buffers. Moreover, it will probably lead to inconsistent decisions on the part of staff that will cause distrust among the regulated community.

١

The regulations should start with a maximum buffer requirement of 20 feet as set forth in the conservation proposal and in the current DNR guidelines. A 20 foot buffer has also been recommended by the Department of Conservation. That should be the baseline, the presumption from which all permit applicants start. If a smaller buffer would adequately protect natural resources then the applicant can seek a smaller buffer in his or her permit. The language of the conservation proposal allows for smaller buffers when they "would not significantly impact the biological, physical, or chemical integrity of the water resource." LRP will be in a much better position to evaluate this standard if it has guidance in the regulation as to what an adequate buffer should be, as opposed to making individual determinations on each permit.

### Highbank Buffer

### (Section 3)

The current guidelines require than an undisturbed 25 foot wide buffer be left landward of the high bank for the length of the gravel removal site. The industry proposal would keep this language in its current form. The Department of Conservation has recommended that at least a 50 foot wide highbank buffer be retained along the gravel mining operation. The conservation proposal, which was supported by the American Fisheries Society and six other workgroup members, would expand the highbank buffer to a minimum of 100 feet. MCE encourages the Commission to adopt the more protective 100 foot buffer requirement.

### **Depth of Mining**

#### (Section 4)

The current DNR guidelines restrict gravel mining to no lower than the water level. The industry proposal would substantially weaken this language by allowing for mining below the stream bed in dry streams, and by allowing for variances from the depth restriction for any "appropriate reason." The majority conservation proposal keeps the language of the current guidelines, which limits the depth of mining to the water surface elevation on wet streams and to the elevation of the stream bottom on dry streams. MCE, the Sierra Club, the Missouri Stream Teams and one landowner supported limiting the depth of mining to one foot above the water elevation on wet streams and one foot above the stream bottom on dry streams.

MCE supported the tighter standard for depth of mining because of a common sense belief that the current guideline is too weak. Setting the requirement at the water level, or at the depth of the stream bed, allows operators to flatten an entire section of stream, making it much more likely that the stream will create a new channel during the next high water event. Creating conditions that encourage streams to change their course leads to increased sediment loads, diminished aquatic habitat and bank erosion. Leaving one foot of material above the water level or stream bed will better ensure that gravel mining does not cause unnatural erosion of the stream bed or banks. Apparently for these reasons, the State or Arkansas limits mining to one foot above the water level.

At a minimum, the current guideline should be retained. The Department of Conservation has written that "gravel should *never* be mined deeper than the water elevation at the time of removal." (emphasis added).

#### **Spawning Season Restriction**

#### (Section 9)

The current DNR guidelines contain language restricting the removal of gravel during fish spawning seasons. The industry proposal would drop the spawning season restriction. The proposal favored by MCE, the Sierra Club, Missouri Stream Teams and the American Fisheries Society would retain the spawning season restrictions.

In addition to the current DNR guidelines, other DNR publications currently recommend imposition of spawning season restrictions. A technical guide prepared by DNR and other resource agencies in 2001 recommends prohibiting gravel mining between March 15 and June 15 "to avoid harming spawning fish and their habitat." Mining activity in or near streams during this critical spawning period will result in decreased fish populations.

### **Outstanding State and National Resource Waters**

#### (Section 13)

A very troubling industry proposal was to drop the current prohibition on mining in Outstanding National Resource Waters ("ONRWs") and Outstanding State Resource Waters ("OSRWs"). The conservation proposal was to keep this restriction in place.

The DNR has a history of protecting these selected waters from actions that would degrade their water quality or overall natural character. See, e.g., 10 CSR 20-7.015, 20-7.031. Similarly, Arkansas prohibits gravel mining on streams that state has designated as "extraordinary resource waters." Streams on the Missouri OSRW or ONRW lists are there because they met stringent criteria designed to protect the state's most outstanding waters. Backing away from this commitment would be a serious mistake that would threaten the integrity of streams cherished by many Missourians.

#### **Contractor Notification**

#### (Section 14)

The current DNR guidelines require that permit conditions must be discussed with any contractors that perform part or all of the work authorized by the permit. A copy of the permit must also be provided to the contractor. The industry proposal would drop this requirement that is already found in the current guidelines. The conservation proposal, supported by MCE, the American Fisheries Society and others, would retain this language.

The industry proposal ignores the reality of many sand and gravel operations in Missouri. Many of these operations are small-scale operations that may use one or more contractors to carry out the mining. Unless the contractor has prior gravel mining experience, it is quite possible that they would not even be aware that it is a regulated activity. In such cases, a failure to provide notice to such individuals makes it more likely that stream resources will be damaged.

Other DNR publications suggest that contractor notification is a wise practice to follow for persons obtaining a gravel mining permit. This is a common sense requirement to ensure that everyone involved in the operation is well-aware of the regulatory requirements. It is hardly an onerous obligation that permittees notify contractors of the requirements of the permit.

### **Endangered Species Protection**

#### (Section 15)

The current DNR guidelines require that permit applicants "consult with" the Department of Conservation and U.S. Fish and Wildlife Service as to the presence of state or federally protected species. The industry proposal would eliminate this requirement entirely. The conservation proposal endorsed by MCE and numerous others – including one gravel miner – is a compromise position that would remove the initial burden of determining the presence of endangered species from applicants, and instead put the requirement on state and federal agencies.

A growing number of fish and mussel species are, unfortunately, endangered, and it is critical that DNR maintain up to date information as to their designation and location. Studies on the impact of gravel mining have shown that certain aquatic species can be especially hard hit by these operations. MDC's work has found that freshwater mussels are "particularly sensitive" to sedimentation and a causal link has been established between gravel mining and the decline of mussel populations on Missouri streams.

The compromise language endorsed by MCE and 11 other workgroup members would simply require DNR to keep species location information on file so it is easily available to permit reviewers. Even though this regulation would shift the burden to the agencies, it is important that DNR make every effort to inform operators that it is ultimately the operator's responsibility to comply with the state and federal endangered species laws and regulations.

Thank you again for the opportunity to participate in the process of promulgating new gravel mining regulations.

Very truly yours,

Bea Covington
Executive Director

Edward J. Heisel Senior Law & Policy Coordinator

#### REFERENCES

Benke, A.C., A perspective on America's vanishing streams, Journal of the North American Benthological Society, v.9 (1990).

Brown, A.V., et al., *Impacts of Gravel Mining on Gravel Bed Streams*, American Fisheries Society, v.127 (1998).

Instream Gravel Mining and Related Issues in Southern Missouri, USGS Fact Sheet 012-02 (Feb. 2002).

Kaminarides, et al., An economic impact analysis of stream bed gravel mining in the State of Arkansas, Arkansas State University (1996).

Kondolf, G.M., Geomorphic and environmental effects of instream gravel mining, Landscape Urban Planning, v.28 (1994).

Pollution Prevention and Environmental Compliance Guide on Sand and Gravel Removal for Landowners, Governmental Agencies and Commercial Operators in Missouri (DNR, June 2001).

Roell, M., Sand and Gravel Mining in Missouri Stream Systems: Aquatic Resource Effects and Management Alternatives (MDC, June 1999).

Sandecki, M., Aggregate mining in river systems, California Geologist, v.42, no.4 (1989).

Turner, B., and M. Roell, Mining Gravel and Protecting Streams, Missouri Conservationist (Oct. 2001).

Waters, T.F., Sediment in Streams - Sources, Biological Effects, and Control, American Fisheries Society Monograph 7 (1995).

#### Mo. Proposed Gravel Mining Rulemaking - Mike Larsen/LRP/DEQ/MODNR



PINSDAVID@aol.com

03/14/2003 08:11 AM

To: nrlarsm@mail.dnr.state.mo.us

cc:

Subject: Mo. Proposed Gravel Mining Rulemaking

I am a member of the Missouri Smallmouth Alliance, a smallmouth bass conservation organization. I am a long time registered voter and resident of Missouri. This is to provide the Department of Natural Resources with comments regarding pending proposed gravel mining reulemaking.

Any exemption from regulation of roughly 70% of the gravel miners who mine our treasured ozark rivers and streams would be a huge mistake. These miners, motivated by easy profits and without regulation, will damage our state environment, and it will result in the State having to spend huge amounts of money to correct their damage. The greed that caused the downfall and pain of Enron, after the deregulation of the electrical industry, is the same greed that will cause these small gravel miners to act without concern for the damage they cause without appropriate mining protective laws. Economic benefits from fishing license sales, fishing equipment, boats & boat construction for floating, and water supply provide far more revenue to the state than from gravel mining. It is understandable that landowners and mining interests feel that gravel is a resource free fot the taking. However, with all of these factors taken into account there must be a balance of interests with the resources benefitting the most people on a continuing basis.

There should be clear regulation of identifing which gravel can be mined and which must remain in place undistrubed. The rules must be clear and enforceable.

Thank you for hearing my comments.

David A. Pins 6724 Black Water Drive St. Louis, Mo. 63129

## OZARK COUNCIL TROUT UNLIMITED

**Branson Chapter** 

Meramec Basin Chapter

Mid-Missouri Chapter

SEMO Chapter
RECEIVED

March 10, 2003

MAR 1 3 2003

**Dear Commissioners:** 

MISSOURI LAND RECLAMATION COMMISSION

I represent the Ozark Council of Trout Unlimited as its Chairman. The council is made up of members from Missouri and Kansas and has 1740 members, 1630 from Missouri. All are members of the national Trout Unlimited organization whose mission is to, "To conserve, protect and restore North America's coldwater fisheries and their watersheds." TU has over 130,000 members in the US.

Spencer Turner, our Director of Conservation, and I have been attending hearings representing Trout Unlimited and were on the Land Reclamation Commission Sand and Gravel Workgroup. The gravel mining industry has been trying to keep any rules being enacted since the regulation of sand and gravel mining was moved from the Corps of Engineers to the state. This workgroup was formed to take recommendations which had been formulated as Best Management Practices or stream protection guidelines back in 1995 between the same stakeholders, agencies, public and the industry, as proposed rules to amend the state Land Reclamation Act. At the very beginning of this workgroup's efforts in September of 2002, the operators and counties refused to accept that any laws were needed, they brought in Senator Sarah Steelman and Senator John Russell to challenge whether DNR had the power to permit gravel mining operations or to make the proposed rules to regulate it. After badgering the DNR lawyers they finally acquiesced and started working on going over the guidelines and coming up with a consensus of the group. In December the workgroup finished putting together a set of proposed rules to be given to the Land Reclamation Commission.

This is a compromise on the earlier compromise made in 1995 but it is needed to regulate gravel mining and to protect our streams. Actually there are three different versions of rules, from the producers point of view, the environmentalists and the original 1995 Guidelines. The three versions with the vote count of the members of the work group were given to the Commission to come up with a single set to be proposed for writing into law. The producer's version of each of the rules had the highest vote, although we urge the commission to pick the version they think is best for the final set of rules to protect Missouri's streams. We would like to point out that in the proposed rule no. 3 that either a mistake was made in casting the vote or tallying it. Trout Unlimited would like to go on record that we support, "An undisturbed buffer of 100 feet wide shall be maintained in an undisturbed condition landward of the high bank for the length of the gravel removal site....", not 25 feet as recorded in the official Workgroup Recommendations. At the last workgroup meeting after we were done voting on our recommendations a resolution was handed out from the County Commissioners Association resolving that no change from present Stream Gravel Mining guidelines be changed into Regulations by the Land Reclamation Commission. I thought this was a

final political jab at passing these needed regulations but I was wrong. On January 30 at the Land Reclamation Commission regular meeting and as the 19th of 20 agenda items you heard comments on the work groups actions. I had to leave after 3 hours into the meeting to get back to my job, but low and behold Senator Steelman showed up just in time to tell the commission that she had introduced a bill in the Missouri Senate to limit regulation of Sand and Gravel Mining to only operators which mine greater than 5000 tons per year. From information from your staff, right now this would exempt over 70% of the permits on record with DNR. I have heard that the Land Reclamation Commission supposedly has said it would agree to a compromise bill if it would decrease the tonnage allowed without a permit to 500 tons. This would still make exempt almost 50% of the current permits. We urge you not to do this and to continue in establishing rules for gravel mining. As Bob Temper of Ozark Flyfishers urged you in his testimony at that January hearing, "The gravel is a resource, but so are the streams where it is located. Neither need be sacrificed for the other. Rules are the standard by which all are measured and held accountable."

If Trout Unlimited - Ozark Council or I can be of any assistance please do not hesitate to contact me.

Sincerely, John D. Wenzhile

John D. Wenzlick, Chairman

573-634-3096

Trout Unlimited - Ozark Council

2010 Daisy Lane

Jefferson City, MO 65109

Jdwenzlick@juno.com

To whom it may concern RECEIVED

Gravel mining without proper ANSSOCIATION COMMISSION

Practice can have a serious negative
impact on stream resources. I Am
encouraging you to Establish regulations

For gravel mining. There must be
tules and enforcement. Thanks

Dan Fechter

IN Wellsmontct

Sticharles mo 63304

#### Comment on sand & gravel mining - Mike Larsen/LRP/DEQ/MODNR



"Jill C. Miller" <jill.miller@sierraclub. org>

03/13/2003 12:54 PM

To: nrlarsm@mail.dnr.state.mo.us

cc: "Cynthia Andre" <csandre1@aol.com> Subject: Comment on sand & gravel mining

March 13, 2003

Land Reclamation Program PO Box 176 Jefferson City, MO 65102

Dear Land Reclamation Commission:

I am opposed to sand and gravel mining practices that cause harmful erosion and destroy healthy habitat for fish and other aquatic wildlife. The industry's proposed regulation are so loose that they would lead to repeated violations and cause unnecessary environmental damage.

I support regulations for sand and gravel mining put forth by the American Fisheries Society, Missouri Chapter. I believe these are in the best interest of protecting Missouri's beautiful streams, as well as neighboring forests and farmland.

Sincerely,

Jill C. Miller Sierra Club St. Louis, Missouri

MAR 1 3 2003

MO Land Reclamation Commission PO Box 176 Jefferson City, MO 65102.

MISSOURI LAND RECLAMATION COMMISSION

Dear Land Reclamation Commission:

Time is fast approaching where the LRC must decide on strong regulations to protect Missouri's clear streams from potential damage by unregulated gravel mining.

Missouri is one of the leading producers of gravel in the nation. I have no problem with gravel mining but it must be done in a reasonable manner. The streams of Missouri are a huge resource. Allowing any size operator to continue removing resources without complying with the accepted practices that protect those resources is negligent.

Numerous scientific studies have indicated that gravel mining actually is a negative economic influence when all aspects are considered. The U.S. Department of Interior reported stream fishing accounted for \$170 million in direct expenditures in 1996. Just think what kind of revenue was produced from the other tourism resulting from use of Missouri streams.

The streams are a renewable resource. They exist forever without cost IF left in their own environment. Destroying the integrity of the resource with unregulated gravel mining will have a negative impact on the entire area for years, not just the small area with the scar of the mining operation.

As a fisherman I contribute to the resource by releasing most of the fish I catch. I respect the landowners rights and carry out litter whenever possible. I fish according to the applicable regulations. It is through strong regulations that Missouri has an outstanding reputation as a smallmouth fishery. I spend money on equipment, lodging, food, an occasional guide, gasoline and other local expenses. If the streams of Missouri are defiled I will spend my fishing dollars in another state.

Missouri has one of the best conservation departments in the nation but it is at the mercy of others that control the land and streams. Recent improvements in fishing regulations have already started to attract anglers across the nation because of the improved smallmouth bass populations and size in Missouri streams. Don't let such a successful program be undermined by an unregulated industry. Mining and stream use can coexist if there are rules in place that are enforced.

Realistic rules and enforcement will provide for economic stability of the grayel mining industry and protection of water quality and stream resources for future generations. Please enact strong regulations to protect our streams from gravel mining.

Thank you for the opportunity to address this issue.

TROY SCHROEDER
3 DENNACLE LAVE
ARRED MO 63010
Troy Silly

MAR 1 3 2003

MO Land Reclamation Commission PO Box 176 Jefferson City, MO 65102.

MISSOURI LAND RECLAMATION COMMISSION

Dear Land Reclamation Commission:

Time is fast approaching where the LRC must decide on strong regulations to protect Missouri's clear streams from potential damage by unregulated gravel mining.

Missouri is one of the leading producers of gravel in the nation. I have no problem with gravel mining but it must be done in a reasonable manner. The streams of Missouri are a huge resource. Allowing any size operator to continue removing resources without complying with the accepted practices that protect those resources is negligent.

Numerous scientific studies have indicated that gravel mining actually is a negative economic influence when all aspects are considered. The U.S. Department of Interior reported stream fishing accounted for \$170 million in direct expenditures in 1996. Just think what kind of revenue was produced from the other tourism resulting from use of Missouri streams.

The streams are a renewable resource. They exist forever without cost IF left in their own environment. Destroying the integrity of the resource with unregulated gravel mining will have a negative impact on the entire area for years, not just the small area with the scar of the mining operation.

As a fisherman I contribute to the resource by releasing most of the fish I catch. I respect the landowners rights and carry out litter whenever possible. I fish according to the applicable regulations. It is through strong regulations that Missouri has an outstanding reputation as a smallmouth fishery. I spend money on equipment, lodging, food, an occasional guide, gasoline and other local expenses. If the streams of Missouri are defiled I will spend my fishing dollars in another state.

Missouri has one of the best conservation departments in the nation but it is at the mercy of others that control the land and streams. Recent improvements in fishing regulations have already started to attract anglers across the nation because of the improved smallmouth bass populations and size in Missouri streams. Don't let such a successful program be undermined by an unregulated industry. Mining and stream use can coexist if there are rules in place that are enforced.

Realistic rules and enforcement will provide for economic stability of the gravel mining industry and protection of water quality and stream resources for future generations. Please enact strong regulations to protect our streams from gravel mining.

Thank you for the opportunity to address this issue.

Horma & Berry

MO Land Reclamation Commission PO Box 176 Jefferson City, MO 65102.

MAR 1 3 2003

Dear Land Reclamation Commission:

MISSOURI LAND RECLAMATION COMMISSION

Time is fast approaching where the LRC must decide on strong regulations to protect Missouri's clear streams from potential damage by unregulated gravel mining.

Missouri is one of the leading producers of gravel in the nation. I have no problem with gravel mining but it must be done in a reasonable manner. The streams of Missouri are a huge resource. Allowing any size operator to continue removing resources without complying with the accepted practices that protect those resources is negligent.

Numerous scientific studies have indicated that gravel mining actually is a negative economic influence when all aspects are considered. The U.S. Department of Interior reported stream fishing accounted for \$170 million in direct expenditures in 1996. Just think what kind of revenue was produced from the other tourism resulting from use of Missouri streams.

The streams are a renewable resource. They exist forever without cost if left in their own environment. Destroying the integrity of the resource with unregulated gravel mining will have a negative impact on the entire area for years, not just the small area with the scar of the mining operation.

As a fisherman I contribute to the resource by releasing most of the fish I catch. I respect the landowners rights and carry out litter whenever possible. I fish according to the applicable regulations. It is through strong regulations that Missouri has an outstanding reputation as a smallmouth fishery. I spend money on equipment, lodging, food, an occasional guide, gasoline and other local expenses. If the streams of Missouri are defiled I will spend my fishing dollars in another state.

Missouri has one of the best conservation departments in the nation but it is at the mercy of others that control the land and streams. Recent improvements in fishing regulations have already started to attract anglers across the nation because of the improved smallmouth bass populations and size in Missouri streams. Don't let such a successful program be undermined by an unregulated industry. Mining and stream use can coexist if there are rules in place that are enforced.

Realistic rules and enforcement will provide for economic stability of the gravel mining industry and protection of water quality and stream resources for future generations. Please enact strong regulations to protect our streams from gravel mining.

Thank you for the opportunity to address this issue.

Jeff And Sarah Reiter 1416 Green Elm Fenton, MO 63026 636-861-2374

Jeffrey W. Reiter Sarah Jeanette Reiter Missouri Citizen concerned for the Environment

Myn Rutes Sanah Renter



MAR 1 3 2003

MISSOURI LAND RECLAMATION COMMISSIO

MO Land Reclamation Commission PO Box 176 Jefferson City, MO 65102.

Dear Land Reclamation Commission:

Time is fast approaching where the LRC must decide on strong regulations to protect Missouri's clear streams from potential damage by unregulated gravel mining.

Missouri is one of the leading producers of gravel in the nation. I have no problem with gravel mining but it must be done in a reasonable manner. The streams of Missouri are a huge resource. Allowing any size operator to continue removing resources without complying with the accepted practices that protect those resources is negligent.

Numerous scientific studies have indicated that gravel mining actually is a negative economic influence when all aspects are considered. The U.S. Department of Interior reported stream fishing accounted for \$170 million in direct expenditures in 1996. Just think what kind of revenue was produced from the other tourism resulting from use of Missouri streams.

The streams are a renewable resource. They exist forever without cost IF left in their own environment. Destroying the integrity of the resource with unregulated gravel mining will have a negative impact on the entire area for years, not just the small area with the scar of the mining operation.

As a fisherman I contribute to the resource by releasing most of the fish I catch. I respect the landowners rights and carry out litter whenever possible. I fish according to the applicable regulations. It is through strong regulations that Missouri has an outstanding reputation as a smallmouth fishery. I spend money on equipment, lodging, food, an occasional guide, gasoline and other local expenses. If the streams of Missouri are defiled I will spend my fishing dollars in another state.

Missouri has one of the best conservation departments in the nation but it is at the mercy of others that control the land and streams. Recent improvements in fishing regulations have already started to attract anglers across the nation because of the improved smallmouth bass populations and size in Missouri streams. Don't let such a successful program be undermined by an unregulated industry. Mining and stream use can coexist if there are rules in place that are enforced.

Realistic rules and enforcement will provide for economic stability of the gravel mining industry and protection of water quality and stream resources for future generations. Please enact strong regulations to protect our streams from gravel mining.

Thank you for the opportunity to address this issue.

Twee De Voto

MAR 1 3 2003

MO Land Reclamation Commission PO Box 176
Jefferson City, MO 65102.

MISSOURI LAND RECLAMATION COMMISSION

Dear Land Reclamation Commission:

Time is fast approaching where the LRC must decide on strong regulations to protect Missouri's clear streams from potential damage by unregulated gravel mining.

Missouri is one of the leading producers of gravel in the nation. I have no problem with gravel mining but it must be done in a reasonable manner. The streams of Missouri are a huge resource. Allowing any size operator to continue removing resources without complying with the accepted practices that protect those resources is negligent.

Numerous scientific studies have indicated that gravel mining actually is a negative economic influence when all aspects are considered. The U.S. Department of Interior reported stream fishing accounted for \$170 million in direct expenditures in 1996. Just think what kind of revenue was produced from the other tourism resulting from use of Missouri streams.

The streams are a renewable resource. They exist forever without cost IF left in their own environment. Destroying the integrity of the resource with unregulated gravel mining will have a negative impact on the entire area for years, not just the small area with the scar of the mining operation.

As a fisherman I contribute to the resource by releasing most of the fish I catch. I respect the landowners rights and carry out litter whenever possible. I fish according to the applicable regulations. It is through strong regulations that Missouri has an outstanding reputation as a smallmouth fishery. I spend money on equipment, lodging, food, an occasional guide, gasoline and other local expenses. If the streams of Missouri are defiled I will spend my fishing dollars in another state.

Missouri has one of the best conservation departments in the nation but it is at the mercy of others that control the land and streams. Recent improvements in fishing regulations have already started to attract anglers across the nation because of the improved smallmouth bass populations and size in Missouri streams. Don't let such a successful program be undermined by an unregulated industry. Mining and stream use can coexist if there are rules in place that are enforced.

Realistic rules and enforcement will provide for economic stability of the gravel mining industry and protection of water quality and stream resources for future generations. Please enact strong regulations to protect our streams from gravel mining.

Thank you for the opportunity to address this issue.

MAR 1 3 2003

MISSOURI LAND RECLAMATION COMMISSION

MO Land Reclamation Commission PO Box 176 Jefferson City, MO 65102.

Dear Land Reclamation Commission:

Time is fast approaching where the LRC must decide on strong regulations to protect Missouri's clear streams from potential damage by unregulated gravel mining.

Missouri is one of the leading producers of gravel in the nation. I have no problem with gravel mining but it must be done in a reasonable manner. The streams of Missouri are a huge resource. Allowing any size operator to continue removing resources without complying with the accepted practices that protect those resources is negligent.

Numerous scientific studies have indicated that gravel mining actually is a negative economic influence when all aspects are considered. The U.S. Department of Interior reported stream fishing accounted for \$170 million in direct expenditures in 1996. Just think what kind of revenue was produced from the other tourism resulting from use of Missouri streams.

The streams are a renewable resource. They exist forever without cost IF left in their own environment. Destroying the integrity of the resource with unregulated gravel mining will have a negative impact on the entire area for years, not just the small area with the scar of the mining operation.

As a fisherman I contribute to the resource by releasing most of the fish I catch. I respect the landowners rights and carry out litter whenever possible. I fish according to the applicable regulations. It is through strong regulations that Missouri has an outstanding reputation as a smallmouth fishery. I spend money on equipment, lodging, food, an occasional quide, gasoline and other local expenses. If the streams of Missouri are defiled I will spend my fishing dollars in another state.

Missouri has one of the best conservation departments in the nation but it is at the mercy of others that control the land and streams. Recent improvements in fishing regulations have already started to attract anglers across the nation because of the Improved smallmouth bass populations and size in Missouri streams. Don't let such a successful program be undermined by an unregulated industry. Mining and stream use can coexist if there are rules in place that are enforced.

Realistic rules and enforcement will provide for economic stability of the gravel mining industry and protection of water quality and stream resources for future generations. Please enact strong regulations to protect our streams from gravel mining.

Thank you for the opportunity to address this issue.

12 March, 2003

RECEIVED

MAR 1 3 2003

MISSOURI LAND RECLAMATION COMMISSION

Land Reclamation Commission P.O. Box 176 Jefferson City, MO 65102

To Whom It May Concern,

I'm writing to you today to urge you to adopt the version of the instream gravel mining rules proposed by the American Fisheries Society during the recent Gravel Mining Working Group deliberations. I am an avid user of Missouri streams. I float, swim, snorkel, camp and find peace and quiet on many Ozark streams. It is my hope that many future generations of Missourians will be able to have the same experiences on our fine streams.

I understand that it is a reality that we Missourians will gather gravel from our flood plains for many uses. I also understand that gravel mining generates some economic income to our state. However, I am also well aware that the economic value of recreational and aesthetic uses of our streams far outweigh those of gravel.

I have also read the scientific literature enough to know about the many negative effects of in- or near-stream sand and gravel mining. Proponents of instream mining have been spouting bad science and/or otherwise fabricating claims about the benefits of mining to streams.

I have personally seen the aesthetic and biological scars that result from poor gravel mining practices. Such uncontrolled mining is dangerous to our proud conservation and recreational heritage. It is also economically dangerous. I strongly urge you to adopt the standards proposed by the aquatic resource professionals of the American Fisheries Society.

Sincerely

Sul Druenderman
Sue Bruenderman
209 Anderson Ave.

Columbia, Missouri 65203

# Little River Research & Design

1125 Wood Road Murphysboro, IL 62966 618-529-7403 fax 618-529-0927 www.emriver.com



Staff Director
Missouri Department of Natural Resources
Land Reclamation Commission
P.O. Box 176
Jefferson City, MO 65102

RECEIVED

MAR 1 3 2003

MISSOURI LAND RECLAMATION COMMISSION

Dear Members,

I am writing to support the American Fisheries Society's stance on gravel mining rules. I do this as a member of both the Gravel Mining Workgroup and the American Fisheries Society, and as a river management professional.

I have been a professional river manager for over seventeen years. For the past eleven years, I have owned a consulting firm that provides services in river and stream restoration and management. I have worked for dozens of public and private agencies. My work concerns not just restoration and protection of river ecosystems, but also the very unforgiving field of infrastructure design. In the St. Louis area alone, I have been responsible for the design and construction of over \$3.5 million in stream structures. The attached list of clients will give you an idea of the depth and breadth of my experience.

You are now familiar with the American Fisheries Society's position on the proposed gravel mining rules. I strongly urge you to support this position. As a river management professional and scientist, I have personally studied and witnessed the damage that uncontrolled extraction of sand and gravel from rivers can do. The body of research in this area shows without question that removal of gravel from river channels can do extensive damage not only to river ecosystems but also to infrastructure such as bridges and utility crossings. The river channel itself, both upstream and downstream of the mined area, can be severely destabilized, causing loss of property values.

During deliberations of the workgroup, members supporting sand and gravel extraction almost universally ignored scientific research and the opinions of experts in this field. It is very clear from the body of published research, however, that sand and gravel removal can greatly damage stream channels. That there are negative effects is beyond question. The only unknown in most cases is to what degree the channels will be negatively affected. Claims that channels need to be "cleaned out" or that gravel removal is otherwise beneficial are without basis in fact or research.

It is important to bear in mind that the proposed rules as endorsed by AFS are a very reasonable compromise that allows for commercial and private extraction of sand and gravel while protecting streams and rivers. As a small business owner I appreciate the need for aggregates and support a reasonable compromise that allows for mining without damaging river resources. We should also remember that the economic value of fishing and recreation in these streams is immense, recently estimated at \$170 million for fishing alone. Though I have worked on rivers throughout the United States, I believe those in the Missouri Ozarks to be among the most beautiful and valuable in the Nation, and like many others who use them for recreation, I urge you to protect this priceless resource by adopting the recommendations supported by the American Fisheries Society.

Sincerely,

Steve Gough

Principal and Fluvial Geomorphologist

Attachment: List of Clients

# Little River Research & Design

Selected Clients 1991-2003

email stevegough@emriver.com



American Fisheries Society\* American Fisheries Society, state chapters in Indiana, Missouri, Minnesota, and Michigan\* American Fisheries Society, North-Central Division\* Arkansas Department of Pollution Control and Ecology\* Attebery Engineering, St. Louis, Missouri Burns and McDonnell Engineers, Inc. Central Lake Superior Watershed Partnership City of Maryland Heights, Missouri Country Lane Woods subdivision, St. Louis County Giffels-Webster Engineers Great Plains Agricultural Council\* Horner and Schifrin, Inc., St. Louis Illinois State Water Survey\* Indiana Department of Natural Resources Inter-Fluve, Bozeman, Montana Intuition & Logic Kabbes Engineering, Inc. Kansas State Conservation Commission

Kansas Department of Wildlife and Parks\*

Foundation/Missouri Botanical

Michigan Department of Natural Resources\*

Litzinger Road Ecology

Gardens, St. Louis

Minnesota Department of Natural Resources\* Missouri Department of Conservation\* Missouri Society of American Foresters\* National Park Service--Ozark National Scenic Riverways, Missouri National Park Service--Buffalo National River, Arkansas\* Northwest Michigan Resource Conservation and Development Council, Inc. Ohio Department of Natural Resources\* O'Devoro Properties, LLC, Marquette, Michigan Resource Management Group, Inc., Big Rapids, Michigan Robert Albright, J.D. Reitz and Jens, St. Louis, Missouri Steigers Corporation, Englewood, Colorado The Nature Conservancy\* Twin Oaks subdivision, St. Louis County US Forest Service--Huron-Manistee National Forest, Michigan US Forest Service--Mark Twain National Forest, Missouri\* **US** Geological Survey Wisconsin Department of Natural Resources\*

\*Client services included workshop presentation.

rev. 6-2003

March 11, 2003

MAR 1 3 2003

MISSOURI LAND
RECLAMATION COMMISSION

#### Dear Land Reclamation Commission:

As a Missouri citizen who has a deep appreciation for our state's natural resources, I am encouraging you to adopt the version of the instream mining rules proposed by the American Fisheries Society during the recent Gravel Mining Working Group deliberations.

Having just built a new home and witnessing the amount of sand and gravel used during construction, I certainly appreciate the practicality and cost effectiveness of these natural materials. However, I do not support mining these materials in a manner that is destructive to the environment.

I enjoy stream fishing and it has been troubling to come upon some real messes resulting from inappropriate gravel mining activities. Not only does this destroy fish habitat at the mining site but also negative effects usually migrate both upstream and downstream from the site. Many beautiful stretches of stream have been ruined for years for the sake of short-term profit.

Extraction of this material must be done in a sensitive manner, particularly when heavy machinery is involved. It does not make sense to benefit one industry to the detriment of one of our greatest economic resources, our wonderful streams. Our natural resources are too precious to squander and are worth millions in outdoor recreation and tourism dollars.

My three daughters have enjoyed the beauty of our streams and the excitement of a fish tugging at the end of the line. I have a granddaughter who just turned three and I'm looking forward to sharing what's very important to me with her. I know she'll laugh when we catch crawdads by turning over rocks in a riffle and she'll marvel at the beautiful colors of a longear sunfish. Please help make those special moments for a long time to come. Adopt the sensible approach proposed by the American Fisheries Society and protect our streams.

Sincerely,

Steve Eder

815 Winston Court

Jefferson City, Missouri 65101

MAR 1 3 2003

Dear Land Reclamation Commission,

MISSOURI LAND RECLAMATION COMMISSION

I'm writing to urge you to adopt the version of the instream gravel mining rules proposed by the American Fisheries Society during the recent Gravel Mining Working Group deliberations.

I personally gain immense and invaluable enjoyment from all varieties of Missouri's streams with my family and many others. Whether it's walking along a small creek with my children fishing for bass and sunfish or canoeing one of Missouri's famed float streams with family and friends as countless others do, these beautiful streams are the sources of inspiration and cherished memories that keep me and countless Missourians going through the work week. I pray that my children will be able to introduce these treasures to their children.

While I realize that many of Missouri's streams contain economically important sediments that we all benefit from, the economic dividends from stream based recreation in Missouri are monstrous. To allow 74% of Missouri's gravel miners to remove, in an unregulated manner, up to 5000 tons each of gravel is a frightening thought.

Missouri's streams have already incurred enough degradation from watershed abuses. Most of us have seen drastic changes for the worse in many of our favorite streams over the last several years. This bill would be a fast track ticket to a new mundane landscape, where the streams lack the life and character that have made us Missourians proud and appreciative with a desire to immerse ourselves in these jewels. Our streams heretofore, have been the cornerstone of a landscape that calls people and their children home, and makes others want to visit these cherished places. The state's stewardship of streams cannot foster a mentality that our streams are merely ditches to exploit without regard for the health and aesthetics of these networks of streams and the land they meander through. I, as millions of others, will seek recreational opportunities in other places. We can't become just another state with no design for economic forces that exponentially eat away at one another. The roads we build with our stream sediments will only serve as a means for people to travel on en route to more desirable destinations in other states.

Thank you for your consideration.

Sincerely,

J. Scott Faiman 300 Manor Drive Columbia, MO 65203